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# Mobility

Making a good program better.

Week Ending September 21, 2012

**Our Mission: Traveler Services; 100% accurate, anywhere, anytime**

- Motorist Quote of the Week about HRTOC SSP Willie Knight:  
*"Willie is a very conscientious driver. He is courteous and respectful and helped me out of a very embarrassing situation. I not only had a flat. I also locked my self out of the car with the car running and cell phone inside. With Willie's help it was all resolved and I was back on the road quickly. Thank you."*
- On Friday, September 21 VDOT held a media briefing at the HRTOC to share with the public lessons learned and how future work will be performed on tunnels and bridges in the region. The briefing follows last weekend's severe traffic impacts as a result of the eastbound HRBT closures for paving work and southbound JRB closures for grid deck replacement.  
Delays were limited to Saturday, September 15 as contractor's crews were able to complete the paving work 15-hours early and open HRBT eastbound lanes on Sunday, September 16.
- The number of calls received on the Hampton Roads TrafficLine on Saturday, September 15 was the highest number of calls ever received on a Saturday.  
On average most TrafficLine calls are received on Fridays of all days of the week, followed by Thursdays.

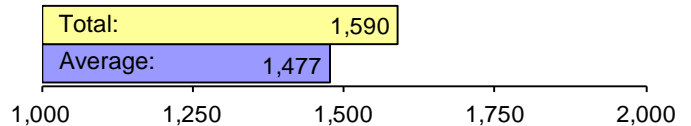
## Did you know...

**There have been a total of 17,595 lane closures entered into LCAMS year-to-date in 2012.**

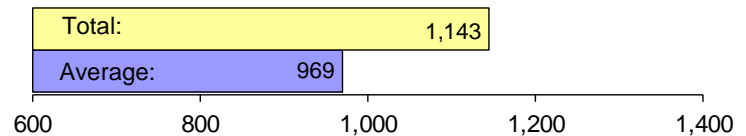
Source: HRTOC Lane Closure Technician

### Operations & Maintenance Summary

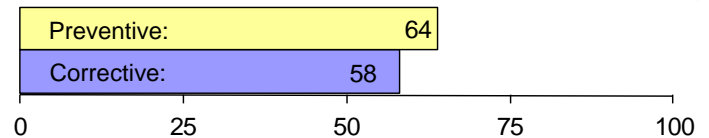
Events Responded to by the Control Room  
Last Week:



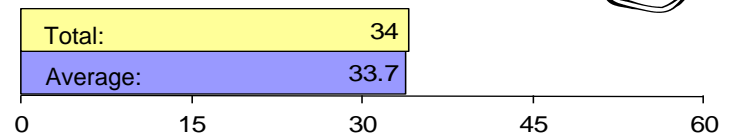
Drivers Assisted by Safety Service Patrollers  
Last Week:



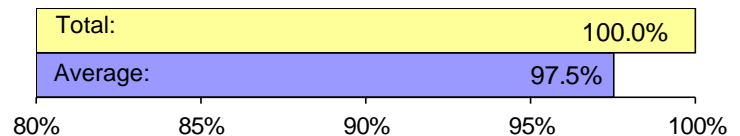
Field Equipment Corrective and Preventive  
Work Orders Completed Last Week:



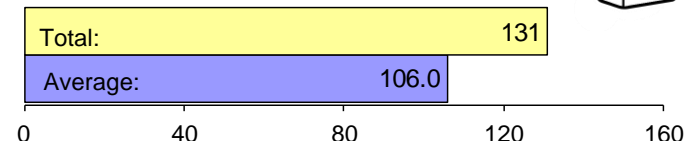
I.T. Work Orders Completed  
Last Week:



SSP Truck Availability  
Last Week:



Number of Gallons Dispensed During  
SSP Fuel Assists Last Week:

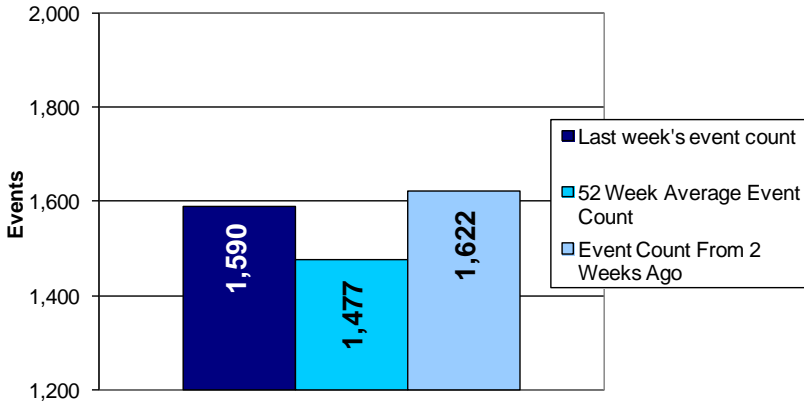


Data Key is located on pages 8-12

# Control Room

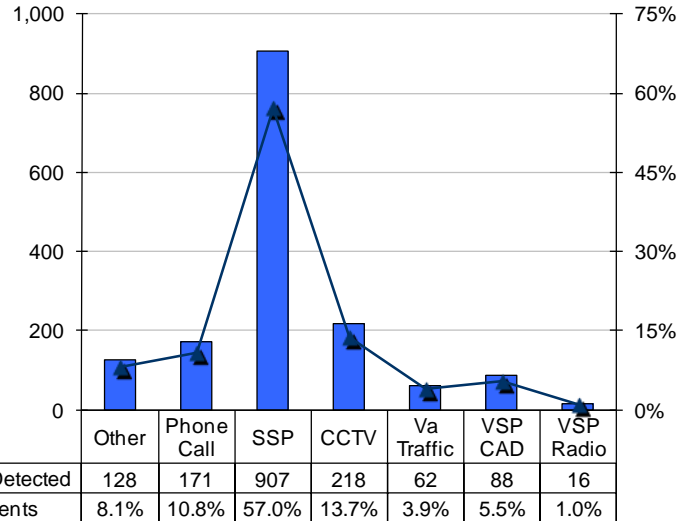


## Number of Events Logged by the Control Room



## Events by Detection Source

Count and percentage of total events that week

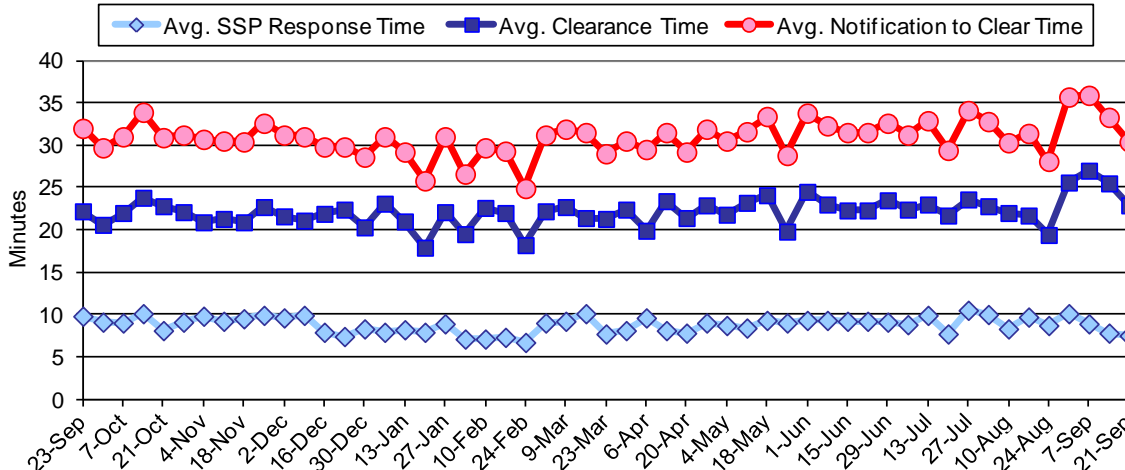


## Incident Duration

Notification < SSP Response

SSP Response < Incident Clear Time

Incident Clear Time < Notification to Clear Time



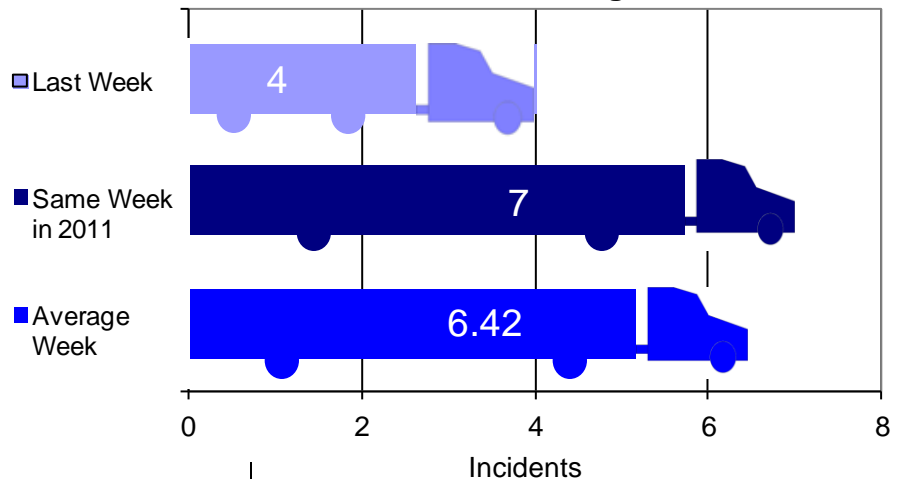
52 Week Average

Total: 30.9 min

Clear Time: 22.1 min

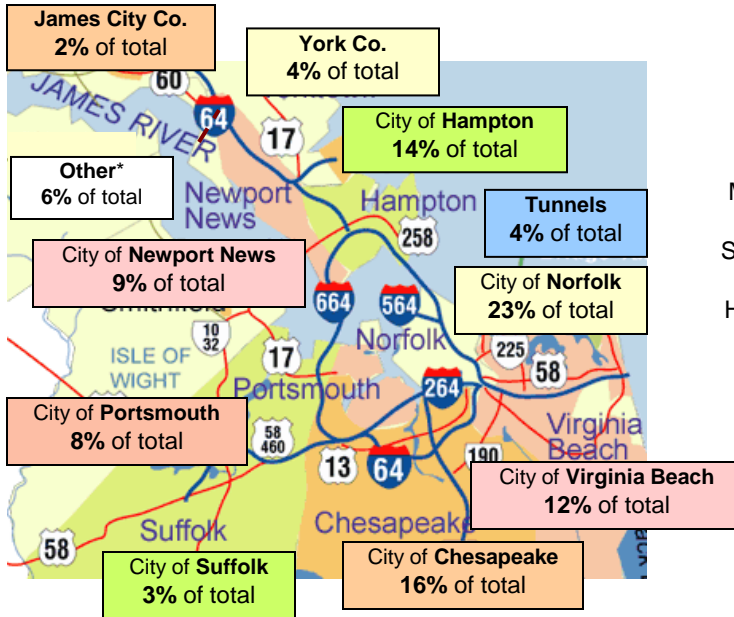
Response Time: 8.8 min

## Number of Incidents Involving Tractor Trailers

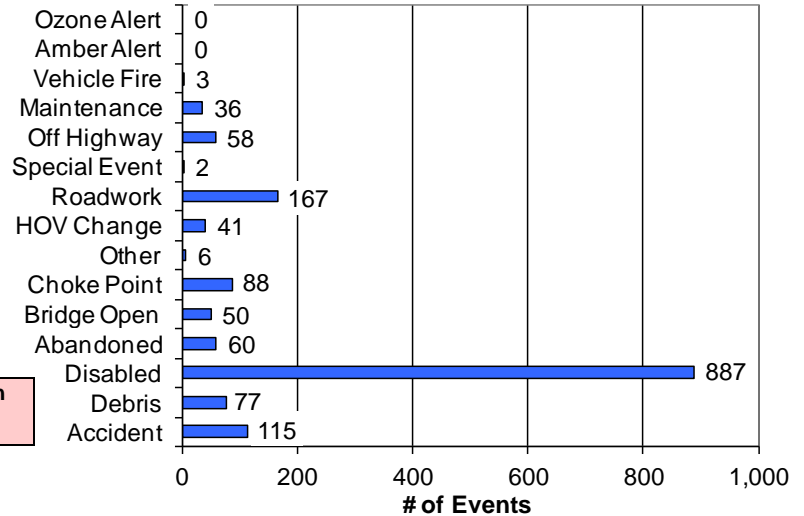


**Note:**  
Definitions for  
'Incident' and  
'Event' are  
located on  
page 11 of the  
Data Key

# Control Room (continued)



## Events Logged by Type



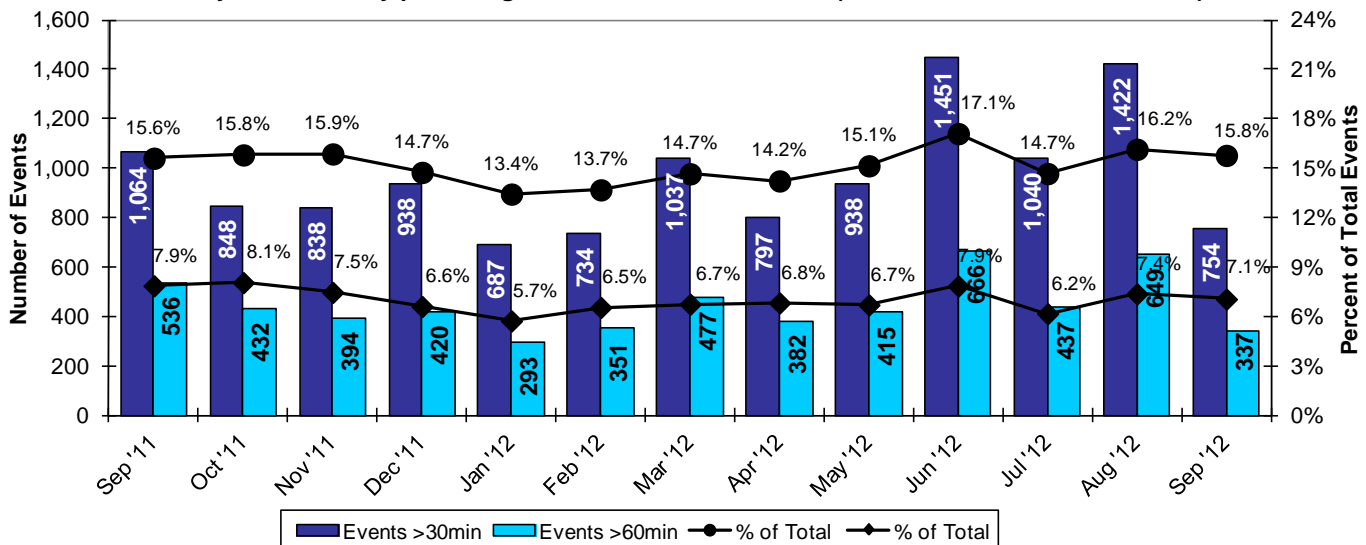
## Weekly Total Events by Geographic Location

	Norfolk	Chesapeake	Virginia Beach	Newport News	Hampton	Portsmouth	Suffolk	York Co.	James City Co.	Tunnels	Other*
21-Sep	369	249	183	149	225	126	42	63	34	59	91
14-Sep	342	279	219	141	210	130	43	63	33	76	86
7-Sep	373	225	212	166	186	113	33	80	22	51	105
31-Aug	396	278	283	168	194	131	23	93	22	70	152
24-Aug	348	316	211	189	199	113	25	96	34	85	112
17-Aug	411	327	255	144	206	145	30	73	32	67	105
10-Aug	337	279	242	202	232	145	31	68	36	67	100
3-Aug	373	247	171	231	245	136	31	77	34	68	119

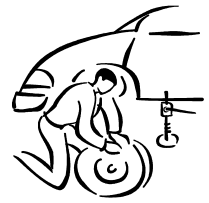
\* Other includes Accomack, Northampton, Williamsburg, Poquoson, Surry, Isle of Wight, Franklin, Southampton, Sussex, Emporia, Greenville

## Events Greater Than 30 and 60 Minutes

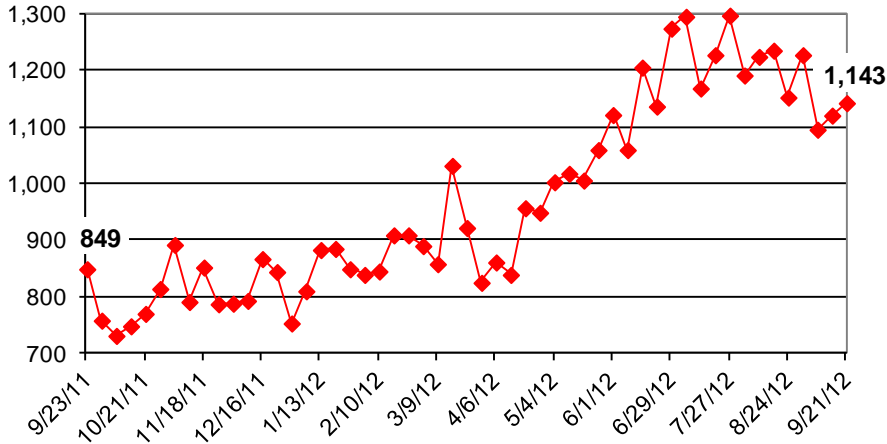
By month and by percentage of total events that month (current month is month to date)



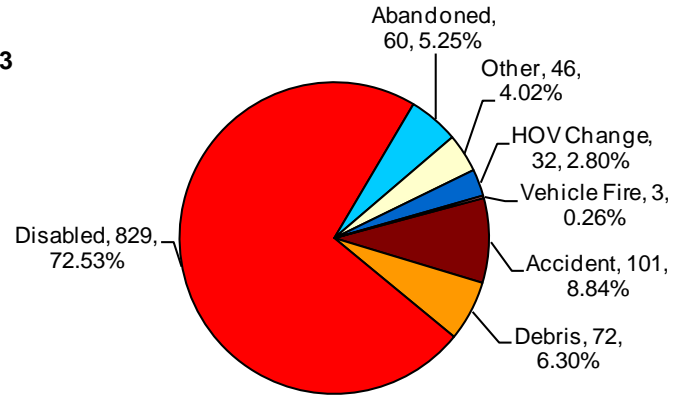
# Safety Service Patrol



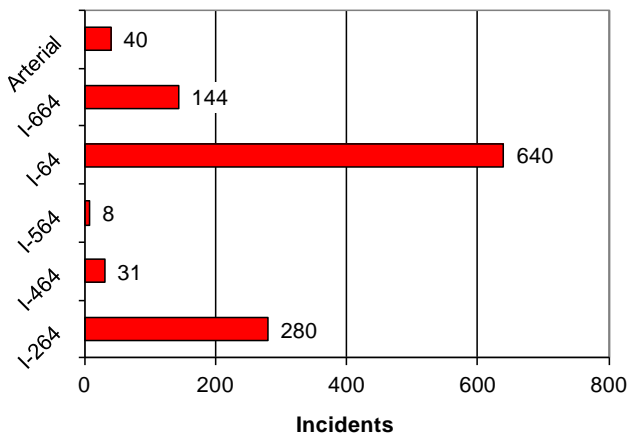
**Total SSP Responses**  
By week for the preceding year



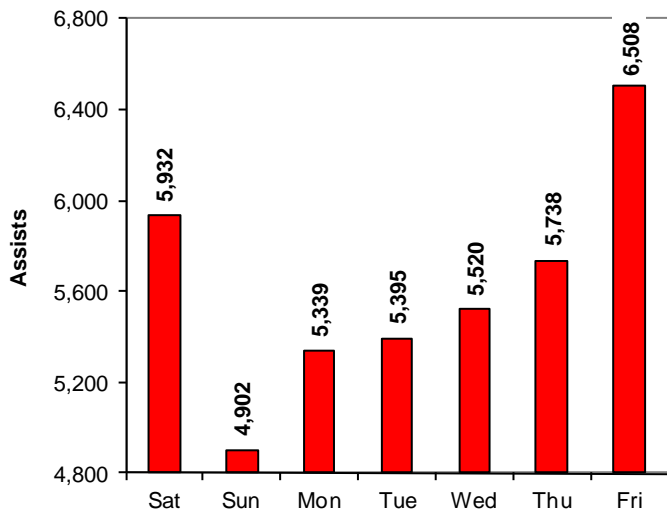
**SSP Assists by Type**



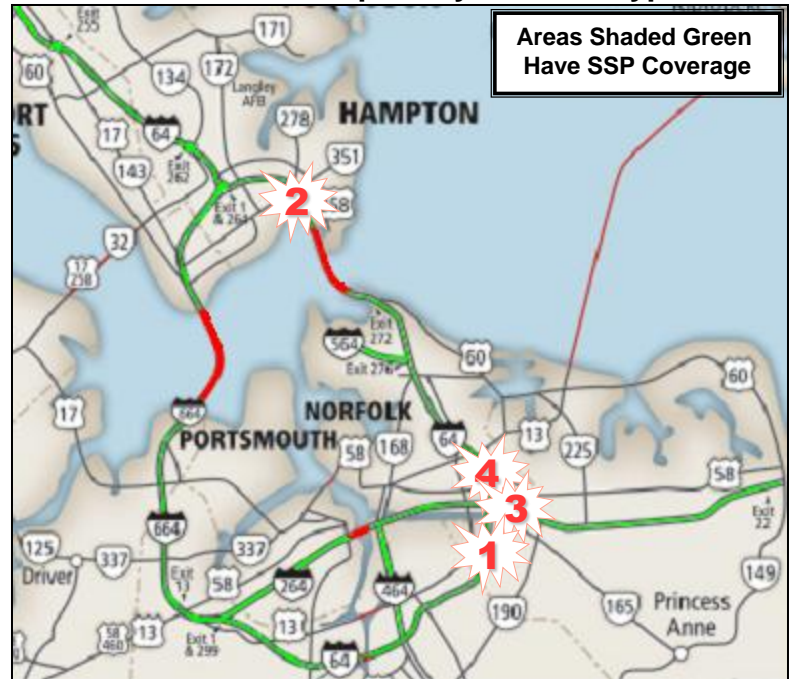
**Number of SSP Assists by Roadway**



**Total YTD Assists by Day-of-Week**



**Most Active Hot-Spots by Incident Type**

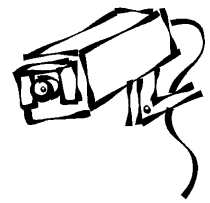


	Most Active	Interstate	Segment ID	# of Incidents	% of Incident Type
1	Abandoned Vehicles	I-64	64-09	5	8.3%
2	Crashes	I-64	64-27	7	6.1%
3	Debris Removed	I-264	264-17	4	5.2%
4	Disabled Vehicles	I-64	64-11	56	6.3%

**Segment ID: Descriptions**

64-09	Indian River Rd - Twin Bridges
64-27	Mallory St - Settlers Landing Rd
264-17	64 / 264 Interchange - Newtown Rd
64-11	64 / 264 Interchange - Northampton Blvd

# Maintenance



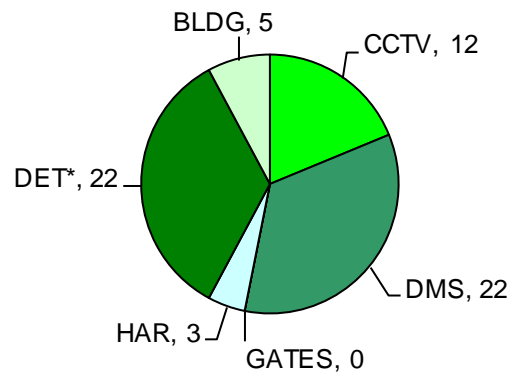
## Current Field Device Operational Availability

Component	Total	Average Not Working	Average Working	Average System Availability
CCTV	276	8.4	267.6	97.0%
DMS*	178	9.6	168.4	94.6%
GATES	5	0.0	5.0	100.0%
HAR	6	0.0	6.0	100.0%
Detectors**	4	1	3	75%

\*\*Detectors are being added to the total count as they are completed in the Detector Replacement Project.

\*DMS that are unavailable due to the ongoing DMS Retrofit Project have been temporarily removed from the total count (196). There are currently 18 signs unavailable due to the retrofit project.

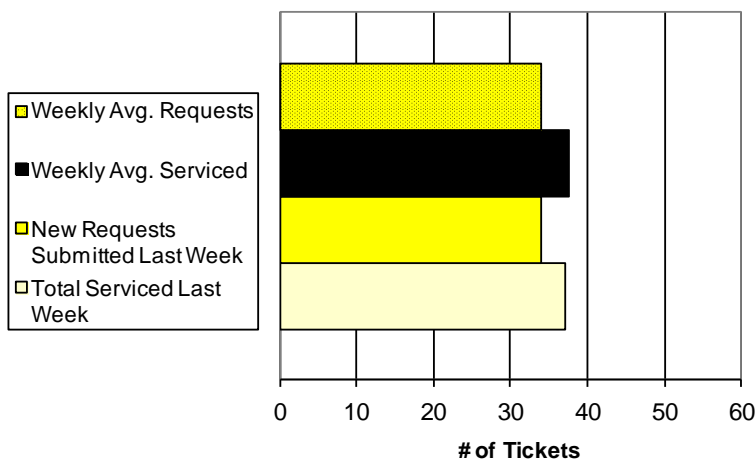
## Number of Preventive Tasks Completed by Equipment Type



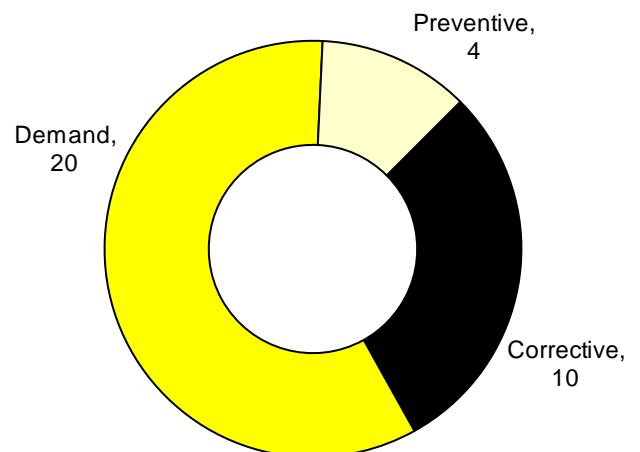
	56 Week Average
CCTV	10.2
DMS	7.7
GATES	0.6
HAR	1.3
DET	16.1
BLDG	1.3

\*PMs for the category of "DET" are for Detector Cabinets, not Detector Stations

## Work Orders Submitted to/Service by I.T.



## I.T. Facility Maintenance Activity

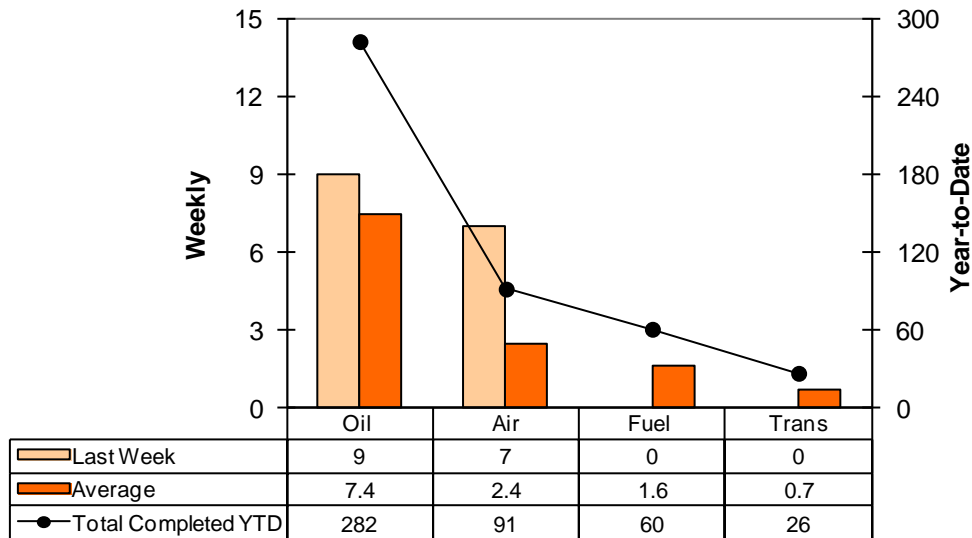




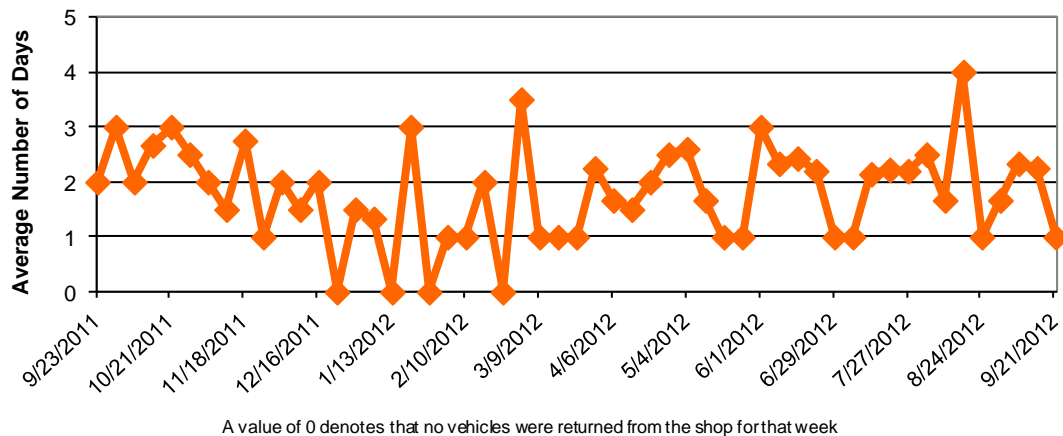
# Fleet Management



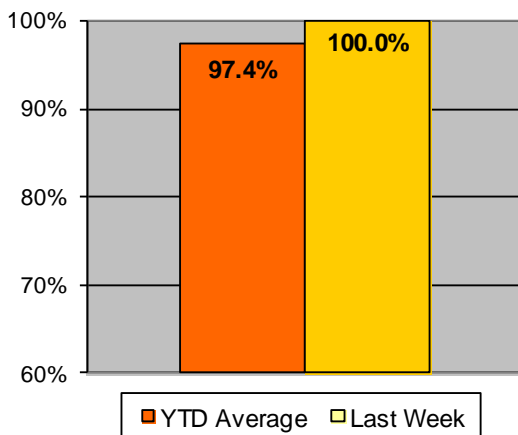
## Completed Fleet Service Activities by Type



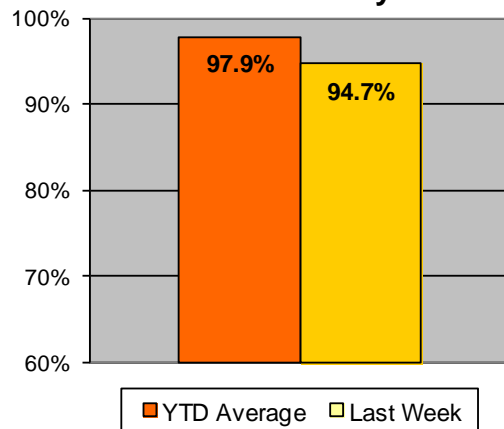
## Average Vehicle Return-to-Service Duration



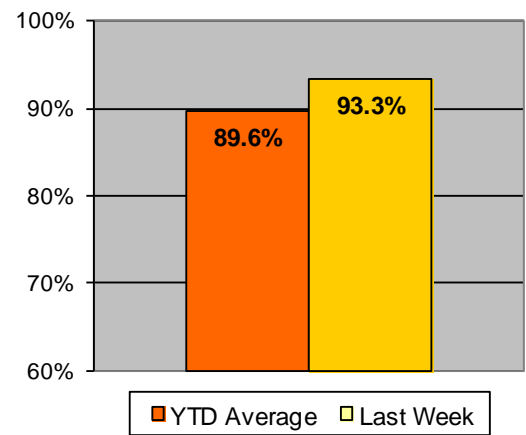
## SSP Vehicle Availability

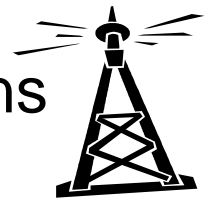


## Field Maintenance Vehicle Availability



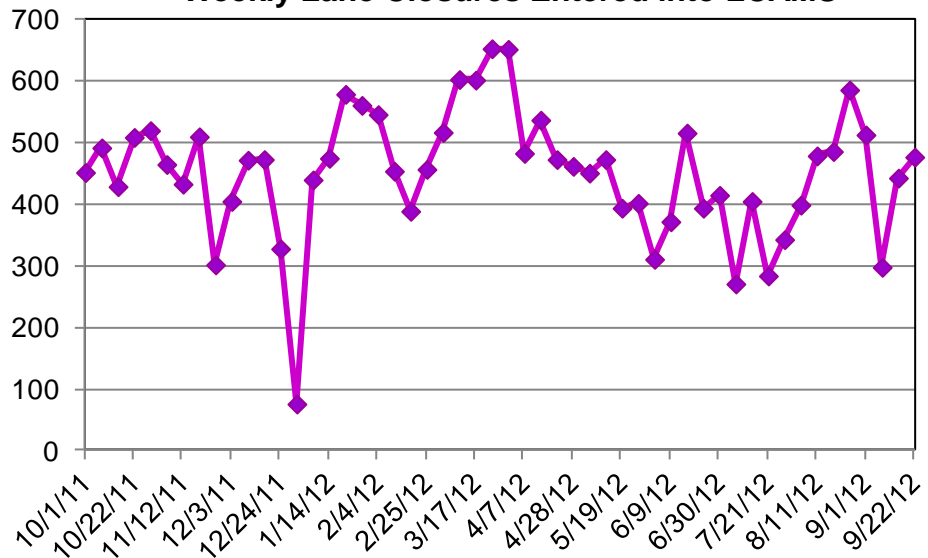
## Pool Vehicle Availability



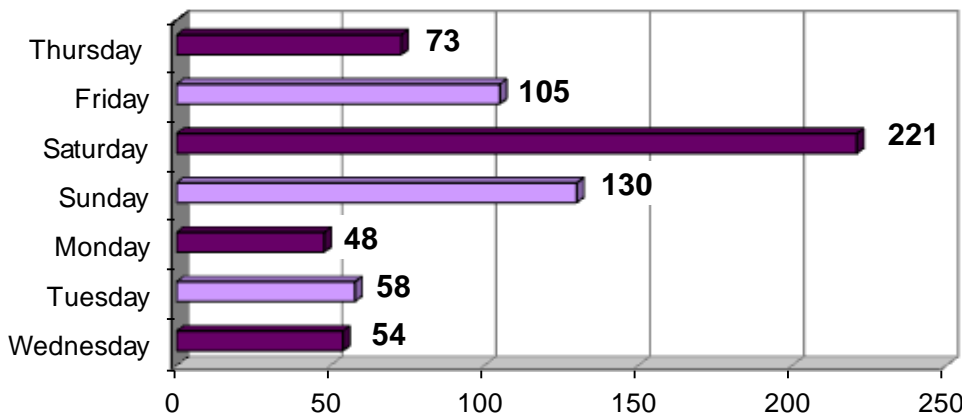


## Weekly Lane Closures Entered into LCAMS

Visit  
<http://vdot.openlcams.com>  
to view current and  
scheduled lane closures  
throughout the state.



## Calls Received On the Hampton Roads TrafficLine

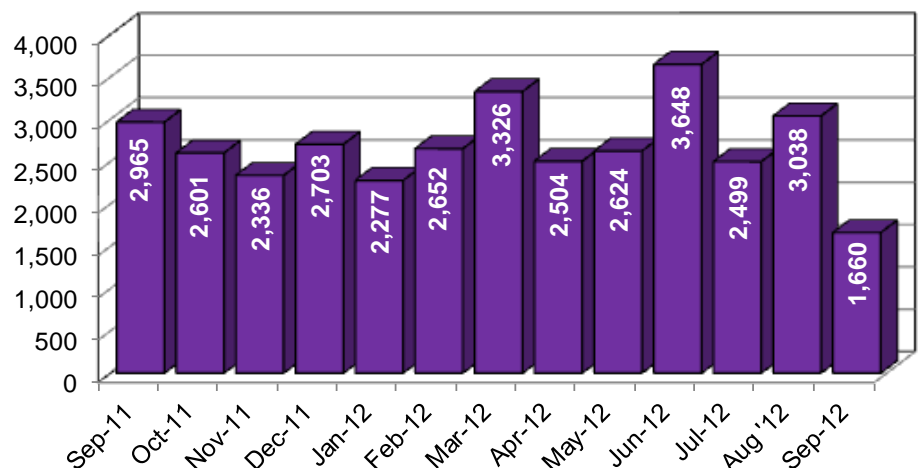


689 calls from motorists  
were received on the  
TrafficLine between  
Thursday 9/13 and  
Wednesday 9/19.

## Highway Advisory Radio (HAR) Counts

Current month reflects 'to-date'

There were 586 events  
associated HAR  
messages last week.



# Data Key



## **Cover Page**

### **Events Responded to by the Control Room Last Week**

Description: Shows the actual past week and the weekly average event count for the rolling year.

Purpose: Provides a snapshot of how many events were responded to the previous Saturday through Friday. Weeks tallying many events will correlate with an increase in VaTraffic/511 traveler information calls.

### **Drivers Assisted by Safety Service Patrollers Last Week**

Description: Shows the actual past week and the weekly average number of SSP assists for the rolling year.

Purpose: Gives a snapshot view of the quantity of SSP assists. These assists reflect direct HRTOC customer contact, an important part of the HRTOC mission.

### **Field Equipment Corrective and Preventive Work Orders Completed Last Week**

Description: The values shown reflect the total number of responses to field equipment corrective maintenance repairs and the total number of preventive maintenance tasks completed during the seven day period.

Purpose: Provides a summary view comparing the amount of corrective maintenance being completed in relation to preventive maintenance. A 2:1 ratio (corrective : preventive) of man hours is considered successful.

### **I.T. Work Orders Completed Last Week**

Description: These values provide a summary view of I.T. work orders closed during the past week's reporting period and the average number of work orders closed each week for the last year.

Purpose: Summarizes the level of I.T. effort from the previous week in comparison to the average for the last year.

### **SSP Truck Availability Last Week**

Description: The percentage of the SSP vehicle fleet that was available for use last week (versus being out of service for maintenance), and a weekly average of that availability for the rolling year.

Purpose: The values of these numbers are indicators of vehicle repair activity and are used in support of scheduling and planning activities.

### **Number of Gallons Dispensed During SSP Fuel Assists Last Week**

Description: Displays the weekly number of gallons of fuel dispensed by the SSPs. Also included is the year-to-date average per week. This number is an estimated one gallon of gas per SSP fuel assist.

Purpose: Reflects the most tangible type of assistance provided by the SSPs. Unlike other SSP assistance types (e.g. changing a tire), fuel can be counted as a direct unit cost. Therefore, with gas prices the way they are, this particular type of assistance has a profound effect on the cost of operations.



# Data Key (continued)



## Operations

### **Number of Events Logged by the Control Room**

Description: This bar graph shows the number of events logged in the incident database for the prior week, for two weeks ago, and the weekly average for the past year.

**\*\* Incidents** are defined as *unplanned situations adversely impacting traffic flow such as accidents, debris, disabled vehicles, and abandoned vehicles.*

**\*\* Events** are defined as *'special events' not affecting traffic, as well as the above defined 'Incidents'.*

Purpose: Shows how the current value compares to the value two-weeks ago and an annual weekly average value. For comparison and analysis purposes, it reveals the past week's numbers relative to "normal" levels and aids in forecasting activity levels based on seasonality, weather, holidays and/or other events.

### **Events by Detection Source**

Description: The bar graph provides a tally of last week's events, broken down by their detection source (VSP Radio and VSP CAD [Virginia State Police radio or computer aided dispatch], VaTraffic, CCTV, SSP, Phone Call and Other [i.e. field contractor or fire department]).

Purpose: Identifies the sources of most our incident discoveries and those sources that need to contribute greater to detection.

### **Incident Duration**

Description: This graph shows the average duration in minutes from incident detection by a source (CCTV, Phone Call, VaTraffic, VSP CAD, VSP Radio, and Other) to when an SSP truck arrives on scene; the time from SSP arrival until the incident (Abandoned, Accident, Debris, Disabled) is completely cleared; and the total amount of time from initial detection to complete clearance.

Note: Only includes incidents responded to by a SSP where the Response & Clear Times were recorded in the Incident Database.

Purpose: This information is used for extemporaneous audits. Allows management to review incident durations in relationship to pre-determined goals and provide a benchmark for incident response.

### **Number of Incidents Involving Tractor-Trailers**

Description: This bar graph shows the number of incidents involving tractor-trailers last week, for the same week last year, and the average for all weeks in the past year.

Purpose: Incidents involving tractor-trailers can take considerably longer to clear and thus have the capability to cause a negative effect on traffic flow and lane clearance. A high number of tractor-trailer incidents can have a negative effect on the number of incidents cleared within the 30 and 60 minute benchmark.

### **Weekly Total Events by Geographic Location**

Description: This table and accompanying map shows the number of events logged per locale by the Control Room. Rarely, certain events are not included in this tally because they are not defined by municipality.

Purpose: This will aid in determining areas of high demand for SSP services and help to adjust scheduling and routes accordingly.

# Data Key (continued)



## **Operations (continued)**

### **Events Logged by Type**

Description: This graph enumerates event counts for the past week, and shows the value for each type:

Amber and Ozone Alert (i.e. the HRTOC displayed a message on the DMS alerting the public of the current situation), Vehicle Fire, Maintenance Action, Off Highway, Special Event (i.e. concert or college graduation), Roadwork, HOV Change (manual change made to the HOV system from the control center), Other (i.e. police or medical emergency), Choke Point and Bridge Open (HRTOC involved in managing congestion at area bridges and tunnels due to heavy traffic or a bridge opening), Abandoned (abandoned vehicle), Disabled (disabled vehicle), Debris (i.e. ladder, mattress or road kill disrupting the flow of traffic), and Accident.

Purpose: This chart is used to quantify which categories of incidents most severely impact the roadways. Over time and by season comparisons are possible by examination of previous reports.

### **Events Greater Than 30 and 60 Minutes**

Description: This graph totals those events which lasted more than thirty minutes and those events which lasted more than sixty minutes in duration. Percentages of total events are included. Purpose: This information is used to compare the activity levels of 'serious events' that take longer than the average clearance time. Results can spotlight contributing factors such as short staffing, inter-agency communication, and patrol route inefficiencies.

### **Total SSP Responses**

Description: The line graph displays SSP assist counts by week for the past year.

Purpose: The graph can be used to estimate the number of SSP responses in future weeks. The information can be used to plan future route expansion and staffing levels.

### **SSP Assists by Type**

Description: This pie chart shows the relative values for the major types of SSP assists last week. Types include Disabled (disabled vehicle), Debris (i.e. ladders or dead animals in roadway), Accident, Vehicle Fire, HOV Change (i.e. an SSP was involved in an HOV Change), Abandoned (abandoned vehicle), and Other (i.e. traffic control for police activity, medical emergencies).

Purpose: Provides information used for forecasting SSP vehicle equipment, tool, and consumable material (flares, batteries) needs short term and long term, and, to an extent, future staffing requirements.

### **Number of SSP Responses by Roadway**

Description: This graph shows the number of SSP assists over the past week, displayed for each freeway that the HRTOC oversees. Also included are responses on arterial roads, bridges, and tunnels.

Purpose: Used to substantiate the number of SSP responses by freeway assignment. This information can be used to plan future patrol area expansion and definition, as well as staffing levels by roadway.

# Data Key (continued)



## **Operations (continued)**

### **Total YTD (Year-to-Date) Assists by Day-of-Week**

Description: This chart depicts the number of SSP assists rendered for each day of week, for the current year-to-date.

Purpose: Helps in planning daily staffing levels based on year-to-date activity levels by day.

### **Most Active Hot-Spots**

Description: This table shows, for four incident categories (Abandoned Vehicles, Accidents, Debris Removed, and Disabled Vehicles), the Segment ID and Interstate of the most active section of roadway, last week's incident count for that section, and the percentage of the total incident type that count represents.

Purpose: Review of these values permit management to detect emerging patterns and plan SSP staffing and routes in relation to those areas requiring the most attention.

## **Maintenance**

### **Current Field Device Operational Availability**

Description: This table shows the total number of units of each equipment type (CCTV, DMS, Gates, HAR, and DET [detector stations]), how many are working and how many are not. The number of working units expressed as a percentage of the total units is also included.

Note: A DMS asset is considered not working if it is illegible

Purpose: This information provides maintenance a clear view of the percentage of working equipment, provides operations a notion of system "eyes and ears" limitations, and provides management information as to current levels of equipment unit functionality.

### **Number of Preventive Tasks Completed by Equipment Type**

Description: This chart and the accompanying table show the preventive maintenance tasks completed during the past week, and weekly averages for the last year. In addition to the five main equipment categories, buildings are included.

Purpose: Helps management allocate PM resources (equipment) and keep to schedule.

### **Work Orders Submitted to / Serviced by I.T.**

Description: This bar graph shows the number of new work order requests submitted to the I.T. Department last week, and the number that were serviced (worked on, but may not have been completed). Weekly averages for the past year are also graphed.

Purpose: The metric helps track I.T. Department workloads, in support of I.T. staff/resource allocation and scheduling.

### **I.T. Facility Maintenance Activity**

Description: This donut graph shows I.T. Department tasks completed during the past week for work types: Corrective - "My printer is not working, please fix it"; Demand - "I need a new printer"; Preventive - regular PM on a schedule; Routine - a replacement printer every three years.

Purpose: The breakout supports management in the allocation of staff, equipment, and budget resources at HRTOC.

# Data Key (continued)



## **Maintenance (Continued)**

### **Completed Fleet Service Activities by Type**

Description: This chart shows weekly, average, and year-to-date counts for vehicle maintenance services. Oil (oil change), Air (air filter), Fuel (fuel filter), and Trans (transmission fluid services) are represented here.

Purpose: Helps to account for labor and dollars expended for vehicle service and to plan for future contract and material expenditures.

### **Average Vehicle Return-to-Service Duration**

Description: These numbers are an average time value representing a “return-to-service” duration in days; the elapsed time from arrival at the vehicle repair location until the vehicle returns to service. Values for SSP, Field Maintenance, and Pool Vehicles are included in the average.

Purpose: These values also measure the performance of the repair effort and are used in scheduling SSP vehicle service and Patroller/Maintenance Staff resources.

### **HRTOC Vehicle Availability**

Description: The three bar graphs show what percentage of the total SSP, Field Maintenance, and Pool fleets were available last week, and also provide a year-to-date (YTD) average for comparison.

Purpose: These numbers measure fleet service effort and success rates.

## **Public Information**

### **Weekly Lane Closures Entered into LCAMS**

Description: The HRTOC began using LCAMS (Lane Closure Advisory and Management System) on May 1<sup>st</sup> 2011. LCAMS is a program that allows users in Hampton Roads to quickly add and modify planned lane closures or determine if a lane closure conflicts with any existing entries.

Purpose: This information shows the efforts associated with managing lane closures throughout Hampton Roads. The Lane Closure Technician, Public Information Officer and Control Room operators are all impacted by increasing lane closure counts.

### **Calls Received On the Hampton Roads TrafficLine (361-3016)**

Description: The Hampton Roads TrafficLine was implemented in December of 2006 in order to assist motorists with their travel information needs. Motorists can dial a number and hear traffic conditions relating to the Highway Advisory Radio reports. This bar graph shows number of calls received by day of the week. Due to the way TrafficLine data is updated, the previous week’s data is only available through Wednesday.

Purpose: This information will help public affairs become aware of what days of the week are of interest to Hampton Roads commuters as well as ensure additional dissemination of timely traffic information to the public.

### **HAR Counts**

Description: Highway Advisory Radio (HAR) messages are created and updated several times during the day. This graph tallies the number of events that have a HAR message associated month-to-date, and includes the values for previous months for comparison.

Purpose: The graph shows how the current value compares to past months; the count mirrors event activity on HRTOC monitored roadways. The count is also an indicator for the effort expended in keeping the HAR message up-to-date, in order to maximize the public’s usability of the HAR resource.